

## **APPENDIX A**

### Clean copy of the Abstract

Various methods and devices for treating a patient who has lost, or is at risk of losing cardiac function by cardiac ischemia are disclosed. Treatment includes first imaging a patient's heart, or a portion thereof, to identify underperfused regions of cardiac muscle, and a source of oxygenated blood that is proximate to the underperfused region. Between the underperfused regions and the oxygenated blood source, a target area is selected where thermal or mechanical injury is introduced, and optionally reintroduced, to convert initial capillary blush, resulting from the injury.